

Hazardous Site Cleanup

Kaercher Creek Park

Work Plan

Pennsylvania Fish & Boat Commission
- and -
Berks County
1/16/2014

**Kaercher Creek Park
Hazardous Contamination Remediation
PFBC & Berks County
Proposed Work Plan**

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Background Information

Kaercher Creek Lake Park is located in Hamburg Borough and Windsor Township, Berks County. The property is owned by the PA Fish & Boat Commission (PFBC) and leased to Berks County (County) to operate as a park. The portion of the property (i.e., "site") addressed by this Work Plan is the wooded area along the northern boundary of the property. This wooded area is bounded by the lake to the south, and private properties to the north.

As a result of the historical lead contamination at this site, PFBC conducted cleanup actions at the park in 1997. Actions included construction of a vegetated soil cap on a field area northwest of the wooded area noted above. In September 2012, individuals reported to the Pennsylvania Department of Health (PADOH) that exposed battery fragments were observed in the surface soils in the park along walking trails and in partially wooded areas near the boat ramp and parking lot. On a September 2012 site visit, EPA confirmed the presence of battery fragments in surface soils.

Weston Solutions, Inc., under the direction of the EPA Region III, conducted a removal assessment and site investigation on the property in the summer of 2013. The goal of the assessment was to determine if elevated lead concentrations were present at the site, either in the surface or sub-surface soil. The resulting report, (i.e., "Final Trip Report" dated 12/13/2013) provided a summary of the test pit and x-ray fluorescence (XRF) screening results on a grid overlay of the property. This report is included for reference as **Attachment A**.

A field visit was held on November 13, 2013. The group walked the site and discussed the boundary of the removal area. In December 2013, PFBC survey staff collected field data to support the planning and implementation of removal measures. This data included the limits of the removal area on the property, as per the EPA On-Scene Coordinator who was present, and topography of the area.

PFBC staff overlaid the grid provided within the Final Trip Report on the property survey. A primary work boundary was defined based on the field observations, field survey delineation, and topographic mapping to include the area that was determined to have the presence of elevated lead concentrations (i.e., lead concentration greater than EPA's action level of 572 mg/kg) and battery fragments. A secondary work boundary was estimated based on high lead concentrations measured during preliminary investigations and outlined in the Final Trip Report. Both the primary and secondary work boundaries are delineated in **Attachment B**.

The submission of this Work Plan by the PFBC and the County does not constitute an admission of liability or responsibility on the part of the PFBC or the County under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) or any other state or federal environmental statute or regulation with respect to any alleged or existing contamination on the property. Nothing in this Work Plan shall be construed as an admission of liability or as a waiver of any defenses which the PFBC or the County may have with respect to any claims arising out of alleged contamination or with respect to alleged status as a Potentially Responsible Party, removal, or remediation of contamination on the property. None of the words, terms, or phrases used within this Work Plan are used pursuant to or intended to be consistent with their definition or meaning under CERCLA or any other environmental statute or regulation, including but not limited to the words "operate" or "operator." The PFBC and the

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County submit this Work Plan in the spirit of goodwill and cooperation, and not as an admission that such participation is required under any statute or regulation.

Proposed Work Activities

As a means of containing the contaminated media, minimizing the potential spread of battery casing parts and lead dust, and minimizing potential exposure risks, PFBC and the County are proposing the work activities outlined below:

- Complete supplemental soil sampling and analysis of lead in areas beyond the primary work area (i.e., area to be capped) where previous sampling indicated the potential for lead concentrations in excess of the action level. In particular, surface soil sampling will be conducted in grid Area 13, where EPA's testing indicated a lead concentration of 533 mg/kg. If lead concentrations greater than 572 mg/kg are detected in the soil samples, those soils will be excavated and transported to the primary work area for placement and compaction below the cap to be constructed in the primary work area, and the excavated area will be backfilled with clean soil to be graded and seeded. Where test pits were completed by the EPA through the previously constructed soil cap (i.e., test pits 1, 5, 6 and 7 at an average size of 25 sq. ft. or less each), and battery fragments and potentially contaminated soils were brought to the ground surface, the upper two feet of materials in these areas will also be excavated, transported to the primary work area for placement and compaction below the cap, and the excavated area will be backfilled with clean soil to be graded and seeded.
- Remove the surface layer of soil (approximately 4 inches) along the upper earthen walkway path where it traverses the wooded area between the parking lot and the previously constructed cap. Cover with geotextile, stone and pave with bituminous material. This pavement will provide a durable barrier to protect the public from any potential contamination beneath the walkway. The material removed for trail construction will be transported to the primary work area for placement and compaction below the cap to be constructed in the primary work area.
- Clear to the ground surface and re-grade the wooded lots within the primary work area grids delineated as having lead concentrations above the action level and battery fragments. The area will be re-graded to a slope of 3 horizontal to 1 vertical (3:1) or flatter, using imported clean fill as necessary. Cap the area with geotextile, 2 feet of clean fill (18 inches of cover soil and 6 inches of topsoil) and seed. Maintain the area as a lawn or field to ensure the capped area remains intact and there is a safe separation for the user and protection from future exposures, erosion, or tracking of contamination.

None of the other sampling results from any of the other grids indicated the presence of lead concentrations at or above the risk-based action level during EPA's test work. In addition, the existing wooded undergrowth and overgrowth discourage the public from walking through this part of the property and spreading or contacting the material. Therefore, PFBC and the County intend to retain the wooded cover across the remainder of the area, with no additional remedial actions proposed.

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Sequence of Operations

Final Delineation Sampling

- Complete supplemental surface soil sampling and analysis for lead (via analysis at a PA-certified laboratory using Method SW-869, 6010C, potentially supported with x-ray fluorescence [XRF] screening in the field) within the boundary of Grid 13, and any other area considered by PFBC and the County to warrant confirmatory or supplemental delineation sampling and testing to define the scope of remedial work.

Design & Permitting

- Complete plan drawings and specifications adequate for bidding purposes.
- Complete Chapter 105 requirements including an erosion and sedimentation control plan and NPDES permit application (if required) for earth disturbance at the project site.
- Coordinate with DEP and the local Berks County Conservation District for review and approval of any required permits.
- Coordinate with the Department of General Services to review, advertise, bid and award the subject project.

Construction

- Install erosion and sedimentation (E&S) control measures per the approved permit.
- Construct diversion ditch along the top of slope area to be capped (i.e., the primary work area as generally shown on Attachment B). Replace the existing drainage pipe.
- Complete timber harvesting and brush removal down to the existing ground surface within the delineated slope area to be capped. Mulch all cleared trees, branches and shrubs and other woody growth. Spread evenly across the cleared slope and/or use to support soil erosion and sediment control (e.g., fill for silt socks, topsoil admixture, etc.).
- Excavate the surface material of the walking trail through the central wooded area. Place and compact this material along the cleared slope area to be capped.
- Place geotextile, stone and bituminous pavement cover on walking trail.
- Excavate any surface materials from the secondary work area found to have lead concentrations greater than the action level. Place and compact this material along the cleared slope to be capped. Backfill the excavated areas with clean fill and seed/mulch.
- Re-grade the slope area to be capped to achieve a slope of 3:1 or flatter, using imported clean fill where necessary. Place and secure geotextile material as an initial cover/barrier over the re-graded slope.
- Place and compact clean fill across the slope area to be capped. Construct drainage swale with an appropriate erosion-resistant lining. Place topsoil, erosion control matting and seed/mulch the slope. The completed cap will consist of 18 inches of imported clean fill covered with 6 inches of imported clean topsoil.

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- When uniform growth is evident on the disturbed areas, remove E&S control measures. Re-seed and ensure growth is re-established in locations where E&S controls were located.

Material Specifications

The final material specifications will be established during the design phase, but the general specifications will be as follows:

- All fill brought on site will be certified by the contractor as clean fill material per Pennsylvania's Management of Fill Policy. Imported fill soil shall generally consist of homogenous natural soils that are free of debris, foreign objects, excess silt, clay lumps, brush, roots, weeds, or other deleterious materials. The soil shall have a maximum particle size of 3 in., and shall have at least 40 percent by weight of particles passing through the U.S. Standard No. 10 sieve. The soil shall be classified as a sandy loam, loam, sandy clay loam, silty clay loam, loamy sand, or silt loam as classified by the USDA Soil Classification System. Additional or alternate requirements may apply to soils used as topsoil or cap cover soils.
- Geotextile separating contaminated slope and clean fill cap will be a non-woven geotextile with a minimum weight of 8 oz/sy, and a suitable friction angle to accommodate cover soils at a 3:1 slope.
- The seeding mixture will be a low-maintenance, native seed mix that is recommended by the seed supplier for the specific site conditions (i.e., 3:1 slope near wooded conditions, etc.). Soil amendments and mulching will be established based on recommendations of the seed supplier, and soil testing if necessary.

Long-Term Maintenance

- Mow the grassy slope area at least once per year. Ensure no trees, brush, or shrubs become established within the slope boundary.
- Inspect the grassy slope regularly for erosion gullies, animal burrows or nests, or other disturbance. Remove, refill and/or compact with soil and re-seed as necessary to prevent erosion of the soil cover.
- Prevent defined walking trails or paths from being worn or constructed within the slope area to help prevent erosion.
- Maintain the paved walkway as the upper pedestrian path.
- Maintain the stone walkway as the lower pedestrian path.
- Maintain the wooded cover of the remaining project area to prevent use of the area.

Notes

- No earthen soils or trees/brush are to be removed from this property. All materials are to be contained within the existing delineated wooded boundary.
- Contract specifications will require all contractors, subcontractors and their employees be notified of the lead contamination on site and properly certified to complete the work activities as presented. Contractors, subcontractors and their employees will be directed to take

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precautions to prevent unacceptable exposure risks (e.g., site-specific health and safety plan, minimizing excessive waste disturbance, watering of dry surfaces to prevent dust migration) and spreading of contamination (e.g., brushing and/or washing of equipment to remove lead-contaminated soils prior to entering areas that are not contaminated).

FINAL TRIP REPORT

KAERCHER CREEK PARK REMOVAL ASSESSMENT AND EXTENT OF CONTAMINATION INVESTIGATION KAERCHER CREEK PARK – LAKE SITE WINDSOR TOWNSHIP, BERKS COUNTY, PENNSYLVANIA

**EPA CONTRACT NO.: EP-S3-10-05
TECHNICAL DIRECTION DOCUMENT NO.: WS01-13-06-002
DOCUMENT CONTROL NO.: W0177.1A.00771**

Prepared For:



**U.S. ENVIRONMENTAL PROTECTION AGENCY REGION III
HAZARDOUS SITE CLEANUP DIVISION
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WESTON PROJECT No.: 20403.012.001.0177.00

DECEMBER 2013

**FINAL
TRIP REPORT
KAERCHER CREEK PARK REMOVAL ASSESSMENT AND EXTENT OF
CONTAMINATION INVESTIGATION
KAERCHER CREEK PARK – LAKE SITE
WINDSOR TOWNSHIP, BERKS COUNTY,
PENNSYLVANIA**

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12/13/2013

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12/13/2013

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12/13/2013

Date



EPA On-Scene Coordinator
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12/13/2013

Date

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APPENDICES

APPENDIX A PHOTODOCUMENTATION LOG

ACRONYMS AND ABBREVIATIONS LIST

bgs	below ground surface
EPA	United States Environmental Protection Agency
OSC	On-Scene Coordinator
PADEP	Pennsylvania Department of Environmental Protection
ppm	parts per million
site	Kaercher Creek Park Lake Site
SOP	Standard Operating Procedure
START	Superfund Technical Assessment and Response Team
TDD	Technical Direction Document
WESTON®	Weston Solutions, Inc.
XRF	X-ray fluorescence

1.0 INTRODUCTION

Under the Eastern Area Superfund Technical Assessment and Response Team (START) Contract No. EP-S3-10-05, Technical Direction Document No. WS01-13-06-002, the U.S. Environmental Protection Agency (EPA) Region III tasked Weston Solutions, Inc. (WESTON®) to conduct removal assessment and extent of contamination investigation activities at the Kaercher Creek Park Lake Site (site).

The goal of the removal assessment was to determine if elevated lead concentrations, and or battery debris was present at the site. The objective of the extent of contamination investigation was to delineate the extent of contamination associated with observed battery casings and areas of suspected elevated lead concentrations in the surface and sub-surface soil. The investigations discussed in this report were limited to the western portion of Kaercher Creek Park, referred to as the "Lake Site." Field activities were conducted between July 30 and August 13, 2013 and consisted of the excavation of test pits for visual inspection, in-situ screening of soils using a handheld X-ray fluorescence (XRF) analyzer, and ex-situ screening of dried composite soil samples.

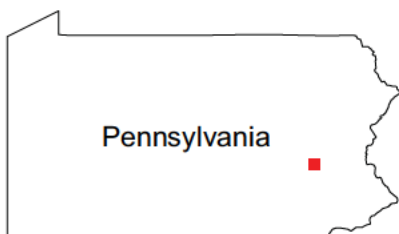
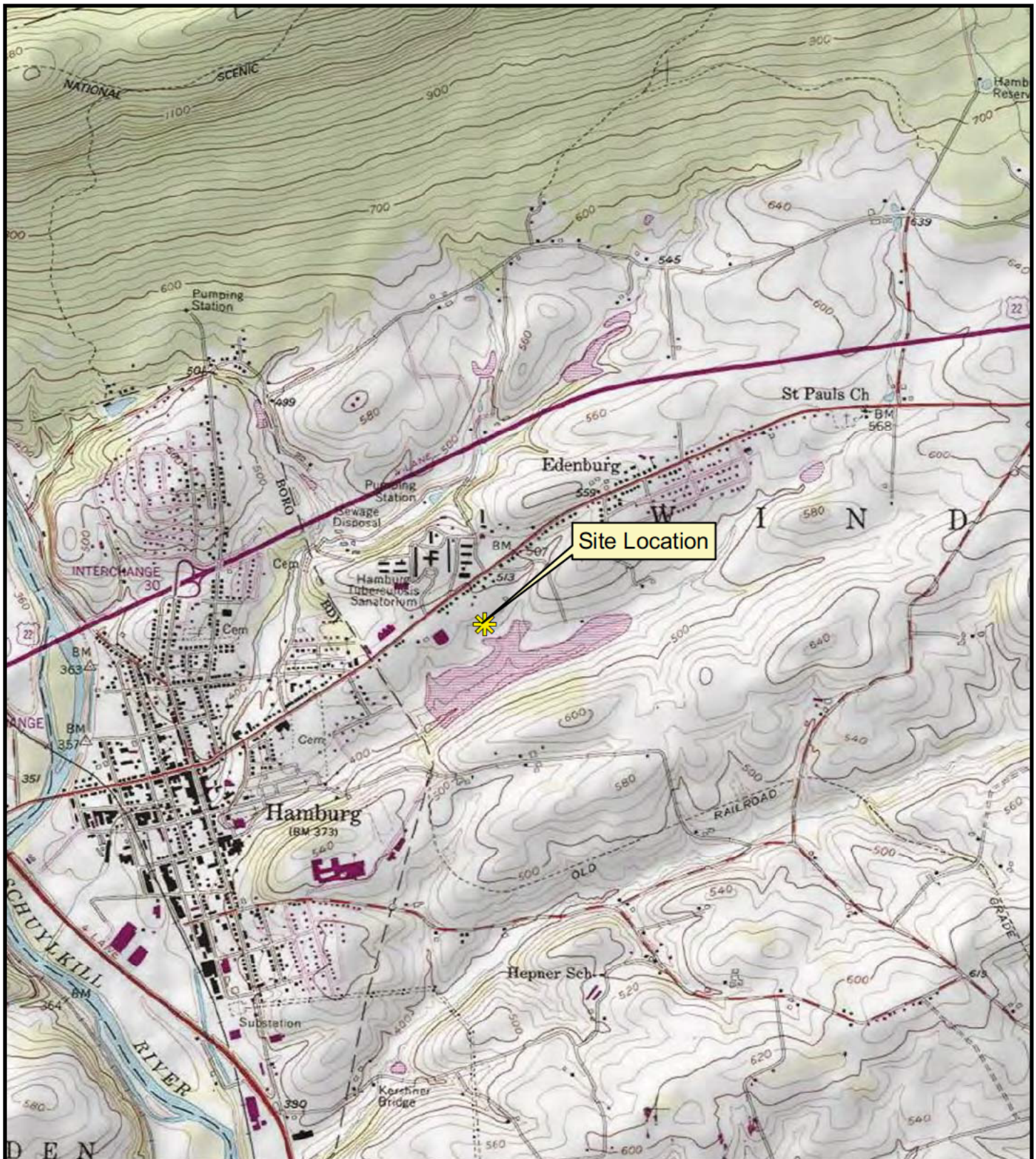
This trip report presents site background information in Section 2.0, summarizes field activities in Section 3.0, and summarizes test pit and XRF screening results in Section 4.0. All references cited in this trip report are listed in Section 5.0. Photographs depicting field activities are presented in Appendix A, Photodocumentation Log.

2.0 BACKGROUND

This section describes the site location, presents a description of the site, and summarizes previous site investigation activities.

2.1 SITE LOCATION

The site is situated within a rural area of Windsor Township, Berks County, Pennsylvania, as shown in Figure 1, Site Location Map. The site consists of a portion of the Kaercher Creek Park. The park is located approximately 1,000 feet east of the Borough of Hamburg, at the physical



USGS 7.5 Minute Quadrangle
Auburn Pa, 1984, Hamburg Pa, 1980



Coordinate System:
WGS84 UTM Zone 18N Feet

0 2,000
Feet

Kaercher Creek Park - Lake Site
Berks County, Pennsylvania

Figure 1
Site Location Map

TDD#: WS01-13-06-002
Contract: EP-53-10-05
Modified: 12/10/2013



address of 3401 Old U.S. Route 22. The geographic coordinates of the approximate center of the site are 40.5610° north latitude and 75.9671° west longitude.

2.2 SITE DESCRIPTION

Kaercher Creek Park consists of approximately 185 acres of wooded terrain and open fields and is operated by the Pennsylvania Fish and Boat Commission. The park contains fishing docks, various sports fields, picnic areas, and a concert center. The site is located on the western portion of the park property and consists of approximately 5 heavily wooded acres with two dirt trails.

Along the eastern edge of the site, an access road from Old U.S. Route 22 leads to a parking area and boat launch to Kaercher Creek Lake. The 40-acre lake runs along the southern border of the site and is used for recreational activities. The lake feeds Kaercher Creek, which is a tributary to the Schuylkill River, located approximately 1.25 miles west of the site. The site is bordered on the west by Bridge Church and on the north by residential properties.

2.3 PREVIOUS SITE INVESTIGATIONS

In September 2012, EPA conducted an initial inspection of the site following notification to EPA by the Pennsylvania Department of Health. During this inspection, battery fragments were observed in the surface soils, and in-situ screening with an XRF identified elevated concentrations of lead in surface soils. Two in-situ lead concentrations recorded from surface soils impacted with battery casing fragments were 3,714 parts per million (ppm) and 1,223 ppm. These two data points are recorded in the Memo, "XRF Results for In-Situ Soil Screening at the Kaercher Creek Park Lake Site" as KCPL-IS-01 and KCPL-IS-02, respectively. Upon confirmation of elevated lead concentrations and battery fragments present in surface soils, EPA notified the Pennsylvania Department of Environmental Protection (PADEP) of the findings. EPA and PADEP personnel conducted another site inspection in November 2012, verifying the presence of elevated lead concentrations and battery fragments.

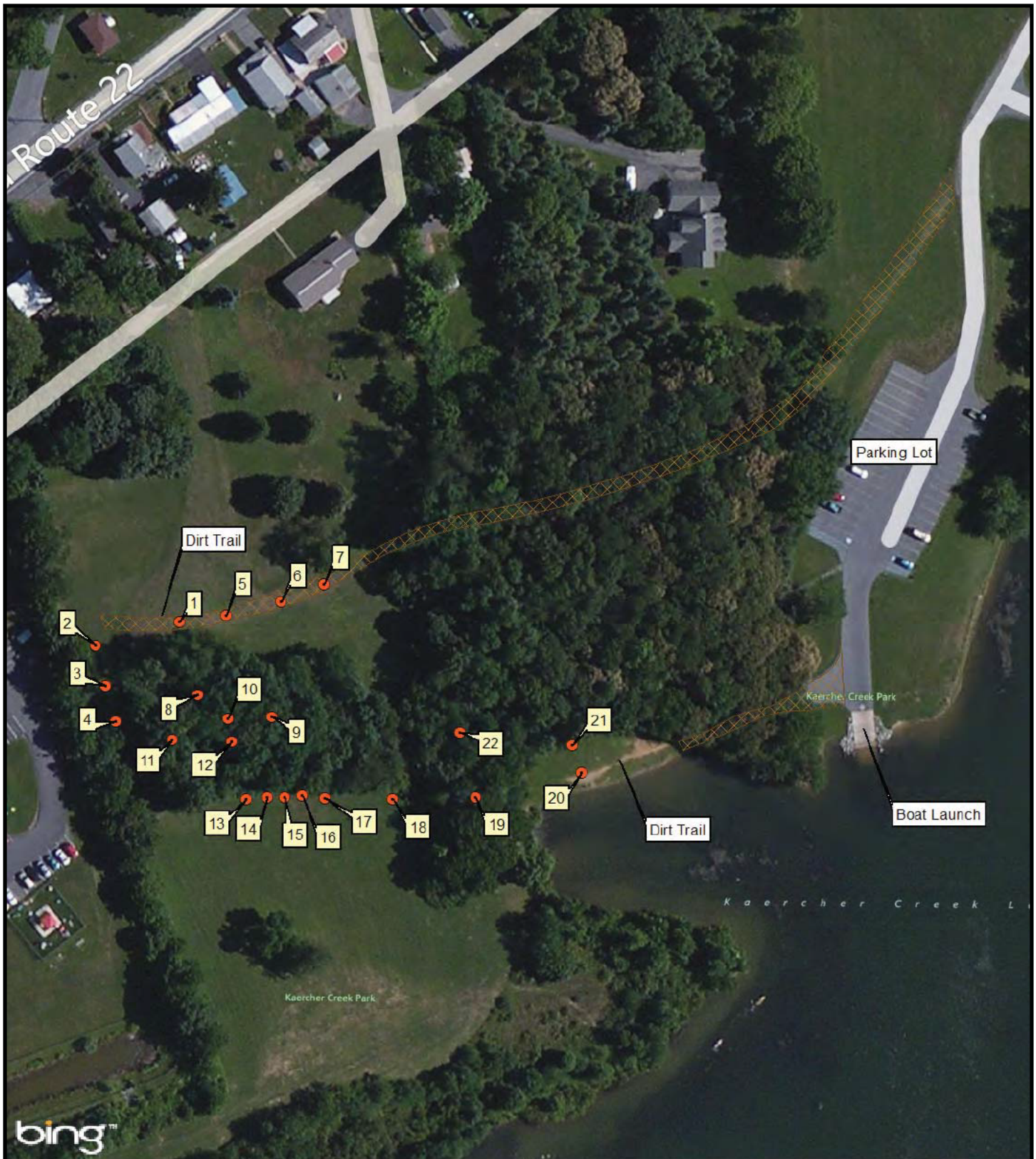
3.0 SITE ACTIVITIES

Between July 30 and August 13, 2013, 22 test pits were excavated across the site. Test pits are identified on Figure 2, Test Pit Locations. During excavation of the test pits, soils were screened in-situ with an XRF to determine the depth and extent of lead contamination. Visual observations were made to determine the depth and extent of battery casing fragments. Composite soil samples were collected, dried, and screened ex-situ to provide replicable screening data for various areas. An in-situ survey of an area of the site was also conducted where exposed battery casing fragments were observed in surface soils. WESTON documented and photographed site activities in accordance with WESTON Standard Operating Procedure (SOP) No. 101, "Logbook Documentation" (WESTON 2006a). This section discusses soil investigation activities during this assessment.



3.1 TEST PIT INVESTIGATION

A total of 22 test pits were excavated by WRScompass, an Emergency and Rapid Response Services contractor for EPA, to a depth of four feet using a mini-excavator. The test pits were excavated on the western and southern portions of the site, in locations that were suspected to contain battery casing fragments. Exact locations were selected by the EPA On-Scene Coordinator (OSC). Test pit locations were recorded using field measurements and landmarks and are identified on Figure 2, Test Pit Locations.

Each test pit was visually inspected for battery casings during excavation. Soil from the base of each test pit was collected in the excavator bucket, and screened for lead in the bucket using a handheld XRF analyzer. Results of test pit inspections and XRF analysis are presented in Table 1, Test Pit Results. Following the collection of data, test pits were backfilled with excavated material.



Legend

-  Site Features
-  Test Pit

Imagery: ESRI, Bing Mapping Service 2012



Coordinate System:
WGS84 UTM Zone 18N Feet



Kaercher Creek Park - Lake Site
Berks County, Pennsylvania

Figure 2
Test Pit Locations

TDD#: WS01-13-06-002
Contract: EP-53-10-05
Modified: 12/10/2013



Table 1 Test Pit Results

TP	Location	Battery Casings Present?	Lead Result (ppm)
1	Along Dirt Path	Yes	NA
2	Western Edge	No	NA
3	Western Edge	No	NA
4	Western Edge	No	NA
5	Along Dirt Path	Yes	1,264*
6	Along Dirt Path	Yes	551
7	Along Dirt Path	Yes	1,132**
8	Area 11	NA	41
9	Area 10	NA	1,085
10	Area 11	NA	313
11	SW Wood Edge	NA	31

TP	Location	Battery Casings Present?	Lead Result (ppm)
12	SW Wood Edge	NA	22
13	SW Wood Edge	NA	23
14	SW Wood Edge	NA	41
15	SW Wood Edge	NA	22
16	SW Wood Edge	NA	43
17	SW Wood Edge	Yes	32
18	SW Wood Edge	Yes	46
19	SW Wood Edge	NA	ND
20	SW Wood Edge	NA	ND
21	Area 5	NA	28
22	Area 7	NA	21

Notes:

* = Sample listed in the memo "XRF Results for In-Situ Soil Screening at the Kaercher Creek Park – Lake Site" as KCPL-SS-03

** = Sample listed in the memo "XRF Results for In-Situ Soil Screening at the Kaercher Creek Park – Lake Site" as KCPL-SS-04

NA = Not analyzed

ND = Not detected

ppm = parts per million

SW = Southwest

3.2 SAMPLE COLLECTION

Surface and subsurface composite soil samples were collected for ex situ screening. All samples were collected in accordance with SOP No. 302, *Surface Soil Sampling* (WESTON, 2006b), and SOP No. 304, *Subsurface Soil Sampling* (WESTON, 2006c).

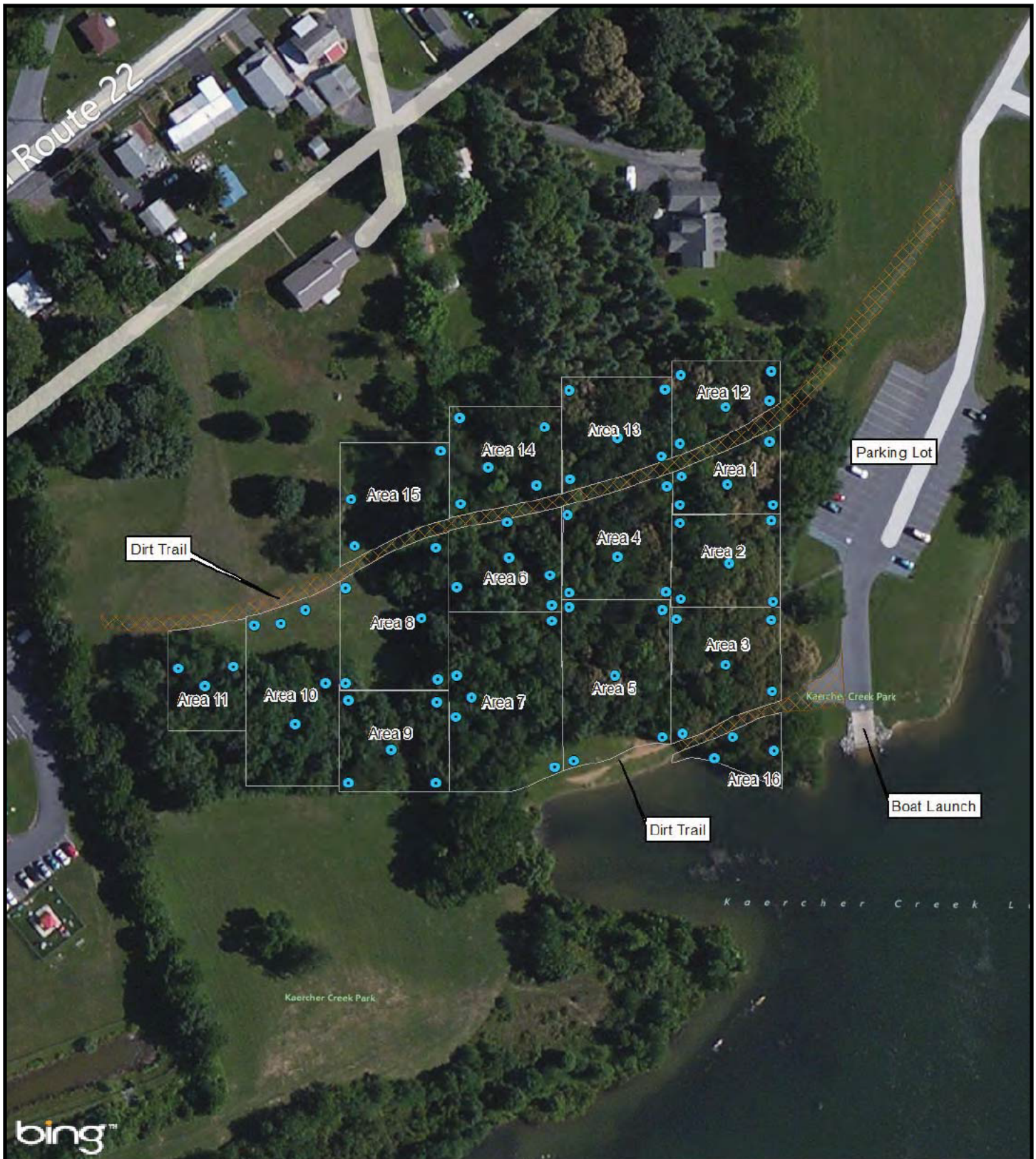
The site was divided into 16 areas as determined by the EPA OSC. The sampling areas are identified on Figure 3, Sampling Locations. Three composite soil samples were collected from each of the areas. Each composite sample was made up of three or five distinct points. An initial composite sample was collected at the surface in each of the 16 areas. If necessary, vegetation and other debris were cleared from the sampling area prior to sample collection. All samples were collected using dedicated, disposal plastic scoops directly into pre labeled, sealable, plastic bags.

Two additional composite samples were collected from the same locations, at a depth of 6 inches below ground surface (bgs) and 12 inches bgs, respectively. Subsurface samples were collected using a mini excavator.

3.3 SAMPLE PREPARATION

Composite soil samples were homogenized within plastic bags by physically mixing and turning soils. Following homogenization, a portion of the sample material was placed in a drying oven and heated for a minimum of two hours at less than 150 degrees Celsius. Once dried, the sample was placed in a mortar and ground to a powder with a pestle. The sample was then passed through a number 60 sieve, collected in a plastic cup with a Mylar reading window, and analyzed using a handheld XRF analyzer. Non-dedicated sampling equipment, including sieves, pans, and ovens, was decontaminated following each use in accordance with WESTON SOP No. 301, "Decontamination Procedures" (WESTON 2006d).

Results of ex-situ soil sample XRF screening are included in Table 2, Ex-Situ Soil Screening Results.



Legend

- Sampling Areas
- Site Features
- Sample Locations

Imagery: ESRI, Bing Mapping Service 2012



Coordinate System:
WGS84 UTM Zone 18N Feet

0 125
Feet

Kaercher Creek Park - Lake Site
Berks County, Pennsylvania

Figure 3
Sample Locations

TDD#: WS01-13-06-002
Contract: EP-53-10-05
Modified: 12/10/2013



Table 2 Ex-Situ Soil Screening Results

Sample Area	Sample Depth (inches)	Result (ppm)	Sample Area	Sample Depth (inches)	Result (ppm)
Area 1	Surface	66.4	Area 9	Surface	106.7
Area 1	6	28.4	Area 9	6	65.6
Area 1	12	30.6	Area 9	12	569
Area 2	Surface	79.8	Area 10	Surface	166.0
Area 2	6	21.5	Area 10	6	670.2
Area 2	12	15.7	Area 10	12	282.5
Area 3	Surface	59.9	Area 11	Surface	61.4
Area 3	6	30.4	Area 11	6	23.4
Area 3	12	97.9	Area 11	12	35.2
Area 4	Surface	76.4	Area 12	Surface	199.6
Area 4	6	21.6	Area 12	6	118.9
Area 4	12	14.9	Area 12	12	19.3
Area 5	Surface	55.3	Area 13	Surface	533
Area 5	6	26.3	Area 13	6	23.2
Area 5	12	16.0	Area 13	12	17.6
Area 6	Surface	240.2	Area 14	Surface	80.7
Area 6	6	33.8	Area 14	6	49.2
Area 6	12	76.3	Area 14	12	37.3
Area 7	Surface	384.3	Area 15	Surface	431.9
Area 7	6	117.4	Area 15	6	5,261
Area 7	12	325	Area 15	12	3,616
Area 8	Surface	590	Area 16	Surface	43.9
Area 8	6	492.1	Area 16	6	30.0
Area 8	12	433.3	Area 16	12	30.6

Notes:
ppm = parts per million

3.4 IN-SITU SURVEY

A portion of the site, located within Area 7, consisted of an exposed embankment of a hill where battery casing fragments were observed in surface soils. Surface soils were analyzed in-situ for lead using a hand held XRF analyzer. Prior to testing, locations were cleared of vegetation and

debris. Analyses were conducted on ten locations along the embankment and are reported in Table 3, In-Situ Survey Results.

Table 3 In-Situ Soil Survey Results

Sample Number	Sample ID listed in memo*	Result (ppm)
Sample 1	KCPL-SS-05	4,233
Sample 2	Not Listed	889
Sample 3	KCPL-SS-06	1,339
Sample 4	Not Listed	450
Sample 5	KCPL-SS-07	929
Sample 6	KCPL-SS-08	1,273
Sample 7	KCPL-SS-09	1,256
Sample 8	Not Listed	928
Sample 9	KCPL-SS-10	3,654
Sample 10	KCPL-SS-11	2,098

Notes:

* = memo "XRF Results for In-Situ Soil Screening at the Kaercher Creek Park – Lake Site"
ppm = parts per million

4.0 REFERENCES

WESTON. 2006a. "*Logbook Documentation.*" SOP No. 101. September.

WESTON. 2006b. "*Surface Soil Sampling.*" SOP No. 302. September.

WESTON. 2006c. "*Subsurface Soil Sampling.*" SOP No. 304. September.

WESTON. 2006c. "*Decontamination Procedures.*" SOP No. 301. September.

APPENDIX A

PHOTODOCUMENTATION LOG

PHOTODOCUMENTATION LOG
Kaercher Creek Park - Lake Site • Windsor Township, PA



PHOTO 1: View of parking area east of site and lake beyond



PHOTO 2: View of southern portion of site along dirt trail

PHOTODOCUMENTATION LOG
Kaercher Creek Park - Lake Site • Windsor Township, PA



PHOTO 3: View of the northwest portion of the site with completed test pits visible



PHOTO 4: View of the soil pile from test pit containing battery casing fragments

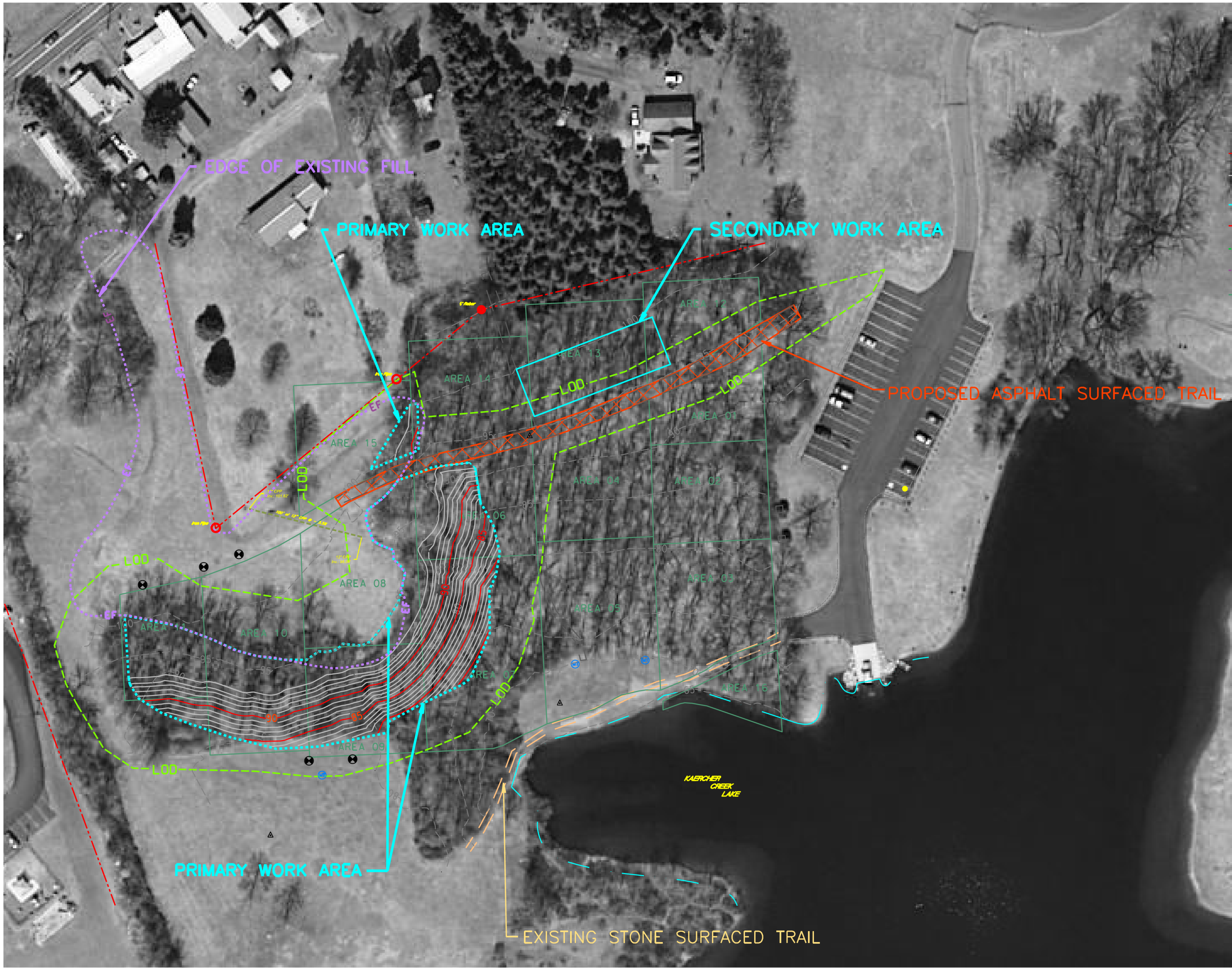
PHOTODOCUMENTATION LOG
Kaercher Creek Park - Lake Site • Windsor Township, PA



PHOTO 5: View of the interior of a test pit with battery casing fragments



PHOTO 6: View of battery casing fragments in a soil pile

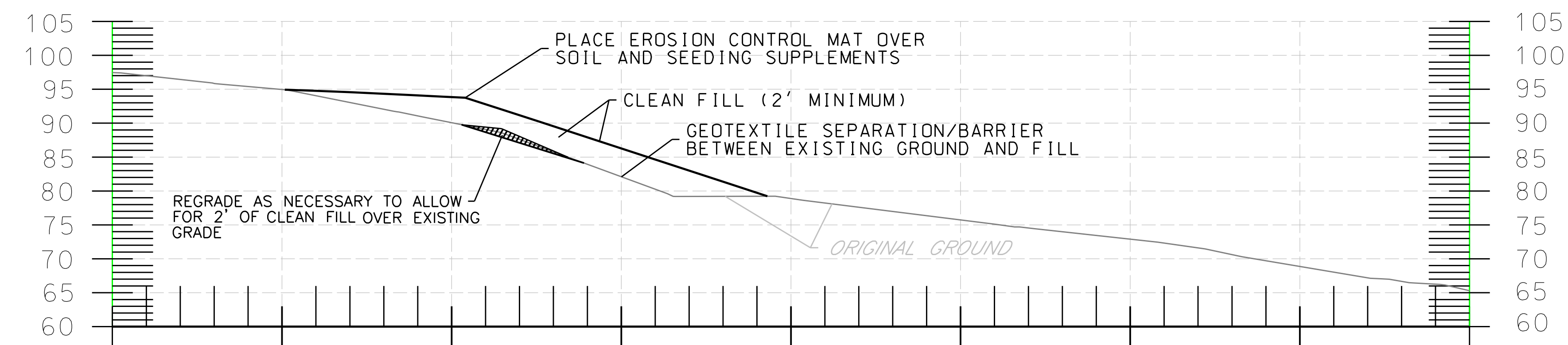


LEGEND

- Monitoring Well
- Test Pit
- Existing Major Contours
- Proposed Major Contours
- Proposed Minor Contours
- Edge of Water
- Property Line
- Limit of Disturbance
- Existing Fill
- EPA Delineated Grids

SITE PLAN

REVISIONS	FILE NO.	"KAERCHER CREEK.dgn"
	REMEDATION PLAN	
	KAERCHER CREEK LAKE NORTH ACCESS AREA	
	KAERCHER CREEK LAKE - F.C. - 182L	
	WINDSOR TWP. BERKS COUNTY PENNSYLVANIA	
	BUREAU OF ENGINEERING AND DEVELOPMENT	
	PENNSYLVANIA FISH & BOAT COMMISSION	
	450 ROBINSON LANE BELLEFONTE, PA 16823	
	COMMONWEALTH OF PENNSYLVANIA	
	Tom Corbett Governor	
	PENNSYLVANIA FISH & BOAT COMMISSION	
	John Arway Executive Director	
	HARRISBURG PENNSYLVANIA	
	SCALE:	N.T.S.
	DATE:	1/15/14
	SHEET	1 OF 2



TYPICAL FILL X-SECTION

REVISIONS	FILE NO.	"KAERCHER CREEK.dgn"
	REMEDIATION PLAN	
	KAERCHER CREEK LAKE NORTH ACCESS AREA	
	KAERCHER CREEK LAKE - F.C.- 182L	
	WINDSOR TWP. BERKS COUNTY PENNSYLVANIA	
DRAWN BY:	BUREAU OF ENGINEERING AND DEVELOPMENT	
SURVEYED BY:	PENNSYLVANIA FISH & BOAT COMMISSION	
SURVEY DATE:	450 ROBINSON LANE BELLEFONTE, PA 16823	
CHECKED BY:	COMMONWEALTH OF PENNSYLVANIA	SCALE: N.T.S.
RECORDED IN:	Tom Corbett Governor	DATE: 1/15/14
DATA COLL. FILE:	PENNSYLVANIA FISH & BOAT COMMISSION	SHEET 2 OF 2
	John Arway Executive Director	
	HARRISBURG PENNSYLVANIA	